VARIOUS.

Glyphography.

Having recently made trial of the process of glyphography in connection with the reproduction of engraved plates from photographs, and having obtained a considerable measure of success, we shall describe the process, if not in complete detail, at least so minutely as to enable any of our readers to practice engraving by the process in question with a fair degree of success.

A polished plate of copper, such as is usually employed by engravers, is blackened by being washed over with sulphide of potassium, sulphide of ammonium, chloride of platinum, or other means. The plate is then washed and dried, and is evenly coated with a mixture of wax, resin, and sulphate of lead, the thickness of the coating not exceeding a thirthieth of an inch. This coating is white and smooth, and the plate when thus prepared is ready for being sketched upon, or, as was the case in our trials, for being photographed upon. The details of our method of effecting the photographic part of the operation shall form the subject of another communication.

On the figure thus photographed, or traced by pencil, the artist proceeds to make his drawing with little tools like needle points, fixed in wooden handles. These tools should vary in size, or rather in the thickness of the point, according to the nature of the work intended to be accomplished.

It will be found most advantageous to use tools one side of which has been filed flat, and a curve given to them near the point by bending them while heated in the flame of the gas. Every touch or stroke of the artist should penetrate through the waxy varnish to the surface of the plate, which, being black, reveals every touch — the work thus appearing black on a white ground, in the same manner as if it were effected by pen and ink on white paper.

The coarseness or heaviness of the lines depends upon the tool by which they are cut; hence broad lines require a tool flattened at the point like a chisel. The drawing must be made as in nature, or non-reversed.

When the picture is examined and found to be right, it is dusted over with plumbago, which by means of a bushy camel's-hair pencil, is distributed through every line and over every part of the surface.

Although we find that other conducting substances, such as bronze powders, act better than plumbago, we have very beautiful pictures produced by Mr. Palmer, in which the coating is the same as that here described.

The plate thus prepared is immersed in an electrotype cell, and a thin tissue of copper is deposited on it by the battery. When the plate has been immersed at night, we find in the morning that the deposit of copper is sufficiently thick to allow of its being removed.

The battery we use is Smee's and the depositing solution is the sulphate of copper, rendered decidedly acid with sulphuric acid.

The cast thus obtained must be backed up with soft metal, sec. art., and in this state it will, if printed from as a wood engraving, yield an exact fac-simile of the original drawing.

If it be required to lower broad masses of white, this can be effected in one or other of the following ways:

After the drawing has been finished, and before it is brushed with black lead, paint over the broad masses of white with melted wax, and let the thickness of the mass thus painted on the surface be determined by the area of the white portion, care being taken not to approach too closely to the lines of the drawing. This having been done, proceed with the plumbago as already directed.

Another way by which to lower the broad whites is to take a cast in plaster of Paris from the original plate, and in this cast to lower any part required by means of a suitable gouge-shaped tool. From the plaster block thus trimmed may be obtained by means of recasting in plaster and stereotyping, any number of metal blocks in a condition ready for printing.

We have in our possession some pictures which have been obtained from surface blocks prepared nearly as described, and which are so fine and delicate as to warrant any person unacquainted with the method of their production in believing that they were printed from engraved copper or steel plates.

British Journal of Photography.

Oxyhydrogen Light.

The experiments commenced last year on the Place de l'Hôtel de Ville, in Paris, on the oxyhydrogen light, are about to be continued, by order of the Emperor, in the court of the Tuileries.

The magnesia cylinders having been found to corrode and waste away too rapidly for the purposes of a continuous light, an artillery officer, M. Caron, after experimenting with a variety of substances, has adopted zircon, a substance which Berzelius pointed out as infusible, and giving forth a very brilliant light under the blowpipe. It is said that M. Caron has had a cylinder of this substance in use with the oxyhydrogen light for a month without the slightest trace of volatilization. The luminous power of zircon, under the oxyhydrogen jet, is about one fifth more than that of magnesia. The zircon employed is an oxyde of zirconium; it is found principally near Miask, at the foot of the Ural mountains. M. Caron economises the zircon, by mounting a point of it on a small stick of magnesia or fire-clay, the zircon being made to adhere by compression and afterwards baking.

Journal of the Society of Arts.

Iron Stoves.

Some of the French doctors have started a fresh crusade against iron stoves. Dr. Carret, at Chambery, noticed a great deal of unaccountable disease in schools and institutions; and thought he could trace the mischief to the introduction of cast-iron stoves. Dr. Deville, in a paper read before the Academy in Paris, says that he proved by a mechanical contrivance that such stoves do give off noxious vapours. He had two bells so connected with electrical apparatus that they should ring when hydrogen or carbonic oxide was given off. Not long after the stove had got thoroughly heated both the bells began to ring. If it is proved that iron heated beyond a certain point gives off unwholesome gases, we had far better adopt the German stove, so much more capable, by the way, of being made a graceful piece of furniture, than our cast-iron abominations. Such a reform would naturally lead to the disuse of the wretched frontage of painfully black-leaded iron round our fireplaces, and a return to the good old Dutch tiles.

Imperial Review.

Effectual Method of Cleaning Glass.

In order to clean glass, and restore its former brightness and transparency, should the usual treatment have proved insufficient, take a little fluoric acid of commerce, dilute it with 4 or 5 times its volume of water, pour a few drops of the diluted acid on a small pad of cotton wool, rub therewith the surface of the glass and then wash it off with water. By this method a thin layer is dissolved on the face of the glass, thereby uncovering a new surface. If a more concentrated solution of fluoric acid is allowed to rest sometime on the glass a concave surface of high brilliancy is thereby produced.
